U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

CERTIFICATE OF WAIVER

ISSUED TO

Flirtey America, Inc.
Responsible Person: Jeffrey Steere
Waiver Number: 107W-2019-04865

ADDRESS –

4940 Brookside Ct
Reno, NV 89502

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.

OPERATIONS AUTHORIZED

Small unmanned aircraft system (sUAS) operations at night, sUAS operations beyond the visual line of sight by the remote pilot in command (PIC), who is the manipulator of the controls of the small unmanned aircraft, in lieu of visual line of sight (VLOS) and operation of multiple small unmanned aircraft systems

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE

14 CFR § 107.29 — Daylight operation
14 CFR § 107.31 — Visual line of sight aircraft operation, and
14 CFR § 107.35 — Operation of multiple small unmanned aircraft systems

STANDARD PROVISIONS

1. A copy of the application made for this certificate shall be attached to and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

NOTE—This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.

SPECIAL PROVISIONS

Special Provisions Nos. 1 to 42, inclusive, are set forth on the attached pages.

This Certificate of Waiver is effective from September 10, 2019 to September 30, 2023 and is subject to cancellation at any time upon notice by the Administrator or an authorized representative.

Office of the Executive Director

BRADLEY J PALMER

Digitally signed by BRADLEY J PALMER
Date: 2019.09.10 10:08:42 -04'00'

Flight Standards Service

SPECIAL PROVISIONS ISSUED TO
Flirtey America, Inc.

General.

The FAA's Flight Standards Service has reviewed your application to ensure compliance with the requirements of 14 CFR § 107.200. The Administrator finds that the proposed sUAS operation can be conducted safely under the provisions of this Certificate of Waiver (Waiver) as listed below because you have established adequate mitigations for risks involved with operating your sUAS in the manner you described. Adherence to the provisions of this Waiver establishes the required level of safety within the national airspace system.

This Waiver may be canceled at any time by the Administrator, the person authorized to grant the Waiver, or a representative designated to monitor a specific operation. As a general rule, this Waiver may be canceled when it is no longer required, there is an abuse of its provisions, or when unforeseen safety factors develop. Failure to comply with any provision listed below is a violation of the terms of this Waiver and may serve as justification for cancellation.

List of Regulations Waived by Section and Title. The following regulations are waived:

14 CFR § 107.29, Daylight operation, is waived to allow sUAS operations during night.

14 CFR § 107.31, Visual line of sight aircraft operation, is waived to the extent necessary to allow the remotely sited remote pilot in command (PIC) to operate a small unmanned aircraft (sUA) without the ability to see the sUA throughout the entire flight. In lieu of the ability to see the sUA throughout the entire flight, another remote pilot who holds a valid remote pilot certificate under part 107 must act as a Visual Observer (VO)/Safety Pilot (VO/SP) and exercise the ability to see the sUA throughout the entire flight on behalf of the remote PIC who is directly responsible for operation of the sUAS in accordance with § 107.19.

14 CFR § 107.35, Operation of multiple small unmanned aircraft, is waived to the extent necessary to allow a person to act as a remote Pilot in Command (PIC) or visual observer (VO) in the operation of more than one unmanned aircraft at the same time.

No part of this waiver will function as an airspace authorization under 14 CFR § 107.41. The FAA's Air Traffic Organization responds directly to such requests.

Common Special Provisions. The Responsible Person is directly responsible for safety of operations conducted under this Waiver and will ensure the remote Pilot in Command (PIC), manipulator of the controls, and Visual Observer (VO)[1] comply with all provisions of this Waiver.

1. The Responsible Person listed on the Waiver is responsible to the FAA for the safe conduct of the operations. Prior to conducting operations that are the subject of this Waiver, the responsible person:
    a. Must ensure the remote PIC, manipulators of the controls, and VO are informed on the terms and provisions of this Waiver and the strict observance of the terms and provisions herein;
    b. Must ensure the remote PIC, manipulators of the controls, and VO are informed and familiar with part 107 regulations not waived; and
    c. The above (a and b) must be documented and must be presented for inspection upon request from the Administrator or an authorized representative;
2. This Waiver must not be combined with any other waiver(s), authorizations(s), or exemption(s) without specific authorization from the FAA;
3. The FAA has the authority to cancel or delay any or all flight operations if the safety of persons or property on the ground or in the air are in jeopardy or there is a violation of the terms of this Waiver;
4. A copy of this Waiver must be available during sUAS operations that are the subject of this Waiver;
5. The Responsible Person listed on this Waiver must maintain a current list of pilots by name and remote pilot certificate number used in the Waiver holder's operations. This list must be presented for inspection upon request from the Administrator or an authorized representative;
6. The Responsible Person listed on this Waiver must maintain a current list of small unmanned aircraft (sUA) by registration number(s) used in the Waiver holder's operations. This list must be presented for inspection upon request from the Administrator or an authorized representative;
7. For the purposes of this Waiver, Direct Participants are the remote PICs, persons manipulating the controls, VO/SPs, VOs and any persons whose involvement is necessary for safety of the sUAS operation;

[1] Title 14 CFR § 107.3 defines the term "visual observer." Any VO participating in operations conducted under this Waiver must meet the requirements listed in § 107.33 throughout the duration of flight operations.

Waiver Specific Special Provisions. sUAS operations may be conducted under this waiver, at night, Beyond Visual Line of Sight (BVLOS) of the remote PIC and with multiple sUAs provided:

OPERATIONAL PROVISIONS

8. The Responsible Person must ensure a remote PIC who holds a valid remote pilot certificate under part 107, is designated at all times during any operation that will occur in accordance with this Waiver. See § 107.19 for a description of the responsibilities and duties of the remote PIC. The Responsible Person must have a procedure for positive, unequivocal designation of the person who is acting as the remote PIC. This procedure must include a three-step positive transfer of controls. Upon such transfer, the responsibilities and duties of the remote PIC under § 107.19 will transfer, accordingly;

9. All operations under this Waiver must utilize at least one VO/SP;

10. The remote PIC must ensure sufficient VO(s) are used to observe the airspace to detect and track all air traffic or hazards;

11. Individuals directly participating in the operation of the sUAS must be easily identifiable visually (e.g., apparel, safety vests);

12. The Responsible Person must ensure all operations conducted under this Waiver follow the procedures outlined in the operations manual. If a discrepancy exists between the provisions in this Waiver and the procedures outlined in the operations manual, the provisions of this Waiver take precedence and must be followed;

13. The operations manual contains at least the following items:
    a. Operator name, address, and telephone number,
    b. Method of manual distribution and revision,
    c. Certificate of Waiver. The operations manual must include a copy of the current Waiver(s),
    d. Aircraft description and limitations list by aircraft type and model,
    e. Method to ensure safety of non-participating persons and aircraft,
    f. Safety briefing of Direct Participants,
    g. Direct Participant minimum requirements,
    h. Method of communications,
    i. Normal operating procedures,
    j. Abnormal operating procedures,
    k. Emergency procedures,
    l. Crew Resource Management,
    m. Risk management, and
    n. Accident Notification. The operations manual must contain procedures for notification and reporting of accidents in accordance with 14 CFR § 107.9 and NTSB 830;

14. The Responsible Person may update or revise its operations manual. The Responsible Person must track such revisions and present revised documents to the Administrator or an authorized representative upon request. The Responsible Person must also present revised documents when applying for extension of or amendment to this Waiver. If any revision to the manual would be contrary to the information provided in the waiver application or obviate a condition or limitation of this waiver, then the Responsible Person must apply for an amendment to this Waiver;

15. The Responsible Person must ensure that a copy of the current operations manual is available to the remote PIC and all other participants during sUAS operations that are the subject of this Waiver;

16. The Responsible Person listed on this Waiver must ensure each remote PIC who will conduct operations under this Waiver is trained in a manner that addresses the items listed in § 107.49(a)-(e) and in a manner that is consistent with how the sUAS will be operated under this Waiver. All training and demonstration for all remote PICs and VOs must be documented and made available upon request by the Administrator or an authorized representative. Training operations may only be conducted under the standard requirements of part 107 (without waiver). The training must include:
    a. sUA limitations,
    b. sUA programming,
    c. sUA operational procedures,
    d. Abnormal procedures,
    e. Air traffic avoidance procedures,
    f. Crew Resource Management,
    g. sUA flight training,
    h. Recognizing and overcoming visual illusions caused by darkness,
    i. Physiological conditions which may degrade night vision, and
    j. Demonstration of sUA ground and flight skills;

17. Prior to operations under this Waiver, all direct participants must attend a safety briefing that addresses at minimum, the following items:
    a. Designated positions, physical locations, responsibilities, and Crew Resource Management,
    b. Planned flight operating area,
    c. Designated launch and recovery areas,
    d. Verification of geo-fence boundaries,
    e. Verification of return to launch and land flight profile, and course,
    f. Procedures for avoidance of other aircraft, and
    g. Procedures for operating under this Waiver;

18. Communication between the remote PIC, VO/SP and VO must occur to facilitate, when necessary, the remote PIC or VO/SP taking action to maneuver the sUA with sufficient time to:
    a. Give way to all other aircraft in accordance with § 107.37,
    b. React to any unforeseen operational or mechanical failure without creating a hazard to other people, other aircraft, or property in the event of a loss of control of the sUA, and
    c. Maintain compliance with this Waiver and the requirements of part 107;

19. Operations subject to this waiver must cease if, at any time:
    a. Safety of human beings or property on the ground or in the air is in jeopardy,
    b. Any failure to comply with the provisions of this Waiver exists,
    c. Full-duplex communications cannot be maintained between the remote PIC, VO/SP and any VO participating in the operation,
    d. sUA control link is lost,
    e. A non-participating aircraft enters the designated flight operating area,
    f. GPS signal is lost, or
    g. sUA GPS location information is degraded;

20. No sUA flight that occurs under this waiver may carry the property of another for compensation or hire;

21. The Responsible Person must establish and maintain a Safety Management System (SMS) appropriate for the size, scope, and complexity of operations that occur under this Waiver. Guidance on establishing and maintaining an SMS is available in FAA Advisory Circular 120-92B (or current revision). This program must be made available upon request by the Administrator;

22. The Responsible Person shall keep at its principal business office or at other places approved by the Administrator, and email the Administrator at 9-afs-820-Part107Reports@faa.gov monthly, the information listed below. The Responsible Person must retain all such records for a period of 90 days after the expiration date of the Waiver.
    a. For each sUAS flight operation conducted under the terms of this waiver:
        i. Date and location of operation,
        ii. Registration number of the sUA,
        iii. Make and model of the sUA,
        iv. Name, certificate number, and location of each remote PIC,
        v. Name, certificate number, and location of the VO/SP for the sUAS operation,
        vi. The name and location of any additional persons who acted as VO(s),
        vii. Location of the remote PIC during the sUA flight, and
        viii. Duration of the sUA operation;
    b. For each sUAS flight conducted under this Waiver that includes any equipment degradation, malfunction, or failure, the Responsible Person must make a record of the degradation, malfunction, or failure by recording the date, time, and a description of the degradation, malfunction or failure. sUAS equipment degradations, malfunctions, or failures include, but are not limited to, the following:
        i. Onboard flight control system,
        ii. Any portion of the navigation system to include Global Positioning System (GPS) functionality,
        iii. Power plant malfunction or failure,
        iv. Battery malfunction or failure,
        v. Electrical power system malfunction,
        vi. Control station malfunction or failure, and
        vii. Loss of control link within the sUAS;

23. Prior to conducting operations under this Waiver, the operational area boundaries must be identified, restricted to access, and during operations, the flight operations area must be monitored as described in the waiver application;

24. Prior to conducting operations, simulation-based testing will be conducted as described in the waiver application;

25. As described in the waiver application, prior to operations subject to this waiver, a geo fence must be set to contain all sUA within the planned operational area;

26. The sUAS must be equipped with the flight termination system described in the waiver application. Prior to operations subject to this waiver, the flight termination system must be tested and verified to operate as described in the waiver application;

27. As described in the waiver application, operations using multiple sUA are limited to not more than 10 (ten) sUA operated simultaneously;

TECHNICAL PROVISIONS

28. As described in the waiver application, the ground control software must ensure that an individual system failure does not interfere with the operation of other sUA or cause incidents, accidents, or loss of control involving other sUAS participating in the operation;

29. Operations conducted under this Waiver may only occur with the make and model sUAS described in the waiver application. Proposed operations of any other manufacturer, make or model of sUAS will require a new waiver application or a request to amend this Waiver;

30. All sUAS operations conducted in accordance with this Waiver must comply with all manufacturer recommendations and limitations for the sUAS;

31. The Responsible Person must maintain each sUAS and its components in accordance with manufacturer's instructions and recommendations. sUAS maintenance includes scheduled and unscheduled overhaul, repair, inspection, modification, replacement, and system software upgrades of the sUAS and its components necessary for flight. A log of all maintenance performed must be kept for each aircraft operated under this waiver. This log must be available to the remote PIC for review prior to conducting operations that are the subject of this waiver. Each sUAS maintenance log must be presented to the Administrator when requested. The log must contain the following information for each maintenance activity:
    a. A description (or reference data acceptable to the Administrator) of work performed,
    b. The date of completion of the work performed,
    c. The name of the person who performed the work, and
    d. The signature of the person who performed the work;

32. Any sUAS that has undergone maintenance must undergo a functional test flight prior to conducting operations under this Waiver. A log entry must be made for each functional test flight. The log entry must contain at minimum the:
    a. Calendar date,
    b. sUA registration number,
    c. Remote PIC who performed the functional test flight,
    d. Duration of the flight, and
    e. The result of the functional flight test;

33. A functional test flight may only be conducted under the standard requirements of part 107 (without waiver);

34. During daytime operations, the sUA must be equipped with high visibility markings and lighting to increase the conspicuity of the sUA. When operated at night, the sUA must be equipped with anti-collision lighting visible from a distance of no less than 3 statute miles. At night, the intensity of the anti-collision lighting may be reduced if, because of operating conditions, it would be in the interest of safety to do so;

35. As described in the waiver application, sUAS ground control station must display in real time the following information:
    a. sUA altitude,
    b. sUA position,
    c. sUA direction of flight, and
    d. sUAS flight mode.

    This information must be available at all times to the remote PIC and VO/SP;

36. The sUAS must audibly or visually alert the remote PIC and VO/SP of degraded system performance, sUAS malfunction, or loss of Command and Control (C2) link between the ground control station and the sUA;

37. Prior to conducting operations under this Waiver, the remote PIC must determine all control links the used in the sUAS, will maintain C2 link within the sUAS at the maximum planned distance for the proposed operation. At all times during operations that are the subject of this Waiver, the remote PIC or VO/SP must maintain the ability to direct the sUA to ensure compliance with the applicable provisions of this chapter;

38. If the remotely located remote PIC loses command or control link with the sUA, as described in the waiver application, the VO/SP must immediately be able to assume command and control of the sUA. In the event this procedure fails, sUA must follow a predetermined route to either reestablish link or immediately recover/land at a predesignated location;

39. If communication between the VO/SP, VO and the remote PIC will occur by electronic device:
    a. The device must be continuous full-duplex,
    b. The remote PIC must be able to use the device hands-free, and
    c. There must be a reliable back-up communication method;

40. Automatic dependent surveillance—broadcast (ADS–B) Out (1090/978 MHz) may not be transmitted from the sUAS when operating pursuant to this Waiver;

41. All emitters used in sUAS must be in compliance with all applicable Federal Communications Commission (FCC) regulations and all provisions of the FCC authorization granted for the emitter. A FCC experimental authorization may not be used for sUAS operations under this Waiver; and

ENVIRONMENTAL PROVISIONS

42. Operations conducted under this Waiver are limited to the location described as Tiger Field, Fernley, Nevada, in the Waiver application.